

NEW BUTTERFLY, HAWKMOTH (LEPIDOPTERA) AND DRAGONFLY (ODONATA) RECORDS FROM VEGETATED CORAL CAYS IN THE SOUTHERN GREAT BARRIER REEF, QUEENSLAND

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Abstract

New butterfly, hawk moth and dragonfly records for the vegetated coral cays of the Capricornia Cays, including the first data from Lady Elliot and North Reef Islands, are presented and previously published records summarised. In total, 46 butterfly, 10 dragonfly and 4 hawk moth species are known from the islands, with 10 butterfly and three hawk moth species newly recorded: *Jamides phaseli* (Mathew), *Prosotas dubiosa* (Semper) and *Psychonotis caelius* (C. & R. Felder) (Lycaenidae); *Danaus affinis* (Fabricius) and *Junonia orithya* Linnaeus (Nymphalidae); *Graphium eurypylus* (Linnaeus), *Papilio aegeus* Donovan and *Papilio demoleus* Linnaeus (Papilionidae); *Delias nigrina* (Fabricius) and *Eurema alitha* (C. & R. Felder) (Pieridae); *Hippotion celerio* (Linnaeus), *Theretra margarita* (Kirby) and *Macroglossum prometheus* (Boisduval) (Sphingidae). New dragonfly records comprise two species of *Ischnura* Charpentier (Coenagrionidae), three species of *Orthetrum* Newman, two species of *Diplacodes* Kirby and *Tramea loewii* Kaup (all Libellulidae). The four largest and most floristically diverse islands of the Capricornia Cays, North West, Lady Elliot, Heron and Masthead Islands, have the most diverse butterfly faunas with 27, 23, 20 and 15 species respectively. All 10 dragonfly species recorded from the Capricornia Cays are known from Lady Elliot Island (including 8 species known only from the island), which has a substantial ephemeral water body. In addition, four butterfly species are recorded from Bushy Island in Redbill Reef off the coast of Mackay, the first published data from this coral cay.

Introduction

Between March 2008 and April 2009, the Queensland Museum and Queensland Parks and Wildlife Service conducted invertebrate surveys of vegetated coral cays in the southern Great Barrier Reef (Burwell *et al.* 2010). These comprised the islands of the Capricorn and Bunker Groups and Lady Elliot Island slightly further to the south-east (collectively referred to as the Capricornia Cays hereafter) and Bushy Island to the north. Here we report on the butterflies, hawk moths and dragonflies recorded during these surveys and compile previously published records of these groups from the islands.

Fourteen islands of the Capricorn and Bunker Groups and Lady Elliot Island (the Capricornia Cays) comprise the largest group of vegetated coral cays in the Great Barrier Reef. Located at the southern end of the GBR between 23°11'S (North Reef Island) and 24°07'S (Lady Elliot Island), they vary in size from 4 (East Hoskyn Island) to 105 hectares (North West Island). Bushy Island (20°57'S, 150°05'E; 7.3 hectares) within Redbill Reef is located about 70 km east of Mackay and about 310 km north of North Reef Island.

Previous records of the butterflies of individual islands in the Capricorn and Bunker Groups can be found in several papers: Heron (Chadwick 1962, Fletcher 1973), Masthead (Hacker 1975, Reeves 1999), North West (Musgrave 1926, Reeves 1969), Erskine (Reeves 1971) and West Hoskyn (Reeves 1973). Summaries of the butterfly fauna of the Capricornia Cays can be found in Reeves (1978, 1984) and Duckworth and McLean (1986), who tabulated butterfly records from all islands of the Great Barrier Reef. A total of 36 butterfly species has been recorded from the islands of the Capricornia Cays, but there are no published records from Lady Elliot and North Reef Islands, nor from Bushy Island.

Only a single hawk moth species, *Hippotion velox* (Fabricius), has been previously recorded from islands of the Capricornia Cays: North West (Musgrave 1926), Heron (Fletcher 1973) and Masthead (Hacker 1975).

Records of dragonflies from the Capricornia Cays are very limited; Reeves (1999) recorded two species from Masthead Island, while Fletcher (1973) noted a single unidentified damselfly attracted to light on Heron Island.

Methods

All 14 vegetated cays of the Capricorn and Bunker Groups and Lady Elliot Island (Capricornia Cays) were visited by Queensland Museum and/or Queensland Parks and Wildlife staff between 28 March 2008 and 30 November 2009 (Table 1). On each island, between three and eight sites were sampled; however, only a single site was sampled on East Fairfax Island (Table 1, see Burwell *et al.* 2010 for precise site details). Vegetation of the islands generally consists of a closed forest of *Pisonia grandis* R.Br. in the interior fringed by more open woodland of *Casuarina equisetifolia* L. and/or mixed shrubland of *Argusia argentea* (L.f.) Heine, *Pandanus tectorius* Parkinson and *Scaevola taccada* (Gaertn.) Roxb. around the circumference (Walker 1991). Patches of open grassland and herbland occur near the beach or in the interior of some islands. Survey sites were chosen to sample the variety of habitat types present on each island. Where possible, at least one site was established in each of *Pisonia* forest, *Casuarina* woodland and beachside vegetation. Sites were also situated in other distinctive vegetation types or in disturbed areas such as in the vicinity of resort or research station infrastructure and within camping areas (Table 1).

At each site pitfall traps (four 45 mm diameter, 120 ml vials and one 1 litre ice-cream container filled with 90% ethanol) and a Malaise trap (Sharkey type, Sante) were operated for 36-48 hours and two person hours of hand collecting was conducted. In addition, at each island an automated Pennsylvania light trap was operated for two nights at one (most islands) or rarely two locations (Lady Elliot and North West Islands) (Table 1). Miscellaneous hand collecting during the day, particularly hand netting of butterflies and dragonflies, was carried out on most islands for a minimum of

Table 1. Summary of sampling dates and intensity, and habitat types sampled during surveys of the Capricornia Cays and Bushy Island in 2008 and 2009. 'Other' habitat types include grassland/*Argusia* (Lady Elliot, East Fairfax, East Hoskyn, Wreck, Erskine), *Pandanus* (Lady Elliot, Wilson), *Lantana* (Lady Elliot), campsites (North West (2), Masthead, Lady Musgrave), research and resort facilities (Heron, Wilson, One Tree) and *Pisonia grandis* plantings (Tryon Island).

Island	Survey dates	Number of sampling sites				
		Beach Vegetation	<i>Casuarina</i>	<i>Pisonia grandis</i>	Other	Light trap sites
Lady Elliot	28-31 Mar.	2	2	1	3	2
Wilson	29 Apr.–1 May	1	0	1	2	1
Wreck	29 Apr.–1 May	1	1	1	1	1
East Fairfax	10-15 May	0	0	0	1	1
West Fairfax	10-15 May	1	1	1	0	1
East Hoskyn	10-15 May	1	0	1	1	1
West Hoskyn	10-15 May	1	1	1	0	1
Lady Musgrave	10-15 May	1	1	1	1	1
Tryon	20-23 Aug.	1	1	1	1	1
One Tree	23-25 Sept.	1	1	1	1	1
Masthead	5-8 Oct.	2	2	2	1	1
Erskine	6-8 Oct.	1	0	1	1	1
North West	9-11 Oct.	1	2	3	2	2
Heron	7-10 Nov.	1	1	1	1	1
Bushy	18-20 Dec.	1	1	1	0	1

one person hour, but often for much longer, especially on Lady Elliot and Heron Islands. Butterfly species observed but not captured on each island were also recorded.

On Bushy Island, three sites were sampled, using the same methodology outlined above, between 18 and 20 December 2009 (Table 1). In addition, North Reef, Tryon, North West, Wreck, and Masthead Islands were visited by Andrew McDougall between 12 and 17 September 2009 and species of butterflies observed were recorded and, where possible, photographed.

All specimens are deposited in the insect collection of the Queensland Museum, Brisbane. Nomenclature used here follows Braby (2000) for butterflies, Moulds (1996) for hawk moths and Theischinger and Endersby (2009) for dragonflies.

Results

We recorded 33 butterfly species from the Capricornia Cays, with four of these also collected from Bushy Island (Table 2). There are 10 new records for the Capricornia Cays: *Jamides phaseli* (Mathew) (Fig. 1c), *Prosotas dubiosa* (Semper), *Psychonotis caelius* (C. & R. Felder), *Danaus affinis* (Fabricius), *Junonia orithya* Linnaeus, *Graphium eurypylus* (Linnaeus), *Papilio aegeus* Donovan, *Papilio demoleus* Linnaeus, *Delias nigrina* (Fabricius) (Fig. 1d) and *Eurema alitha* (C. & R. Felder). All new records were from Lady Elliot Island, except for *P. aegeus* from Masthead and Lady Elliot Islands, *P. demoleus* from North West Island, and *E. alitha* from Wilson Island.

Ten dragonfly species were recorded during the survey (Table 2), all of which were collected from Lady Elliot Island, including eight new records for the Capricornia Cays: *Ischnura aurora* (Brauer), *I. heterosticta* (Burmeister), *Diplacodes bipunctata* (Brauer), *D. trivialis* (Rambur), *Orthetrum caledonicum* (Brauer), *O. sabina* (Drury), *O. serapia* Watson and *Tramea lowei* Kaup. Additional dragonflies were collected only from Lady Musgrave (*I. aurora*) and North Reef Islands (*I. aurora* and *Pantala flavescens* (Fabricius)).

Of the four species of hawk moth collected (Fig. 2, Table 2), *Hippotion celerio* (L.) (Erskine I.), *Theretra margarita* (Kirby) (Erskine I. and Lady Elliot I.) and *Macroglossum prometheus* (Boisduval) (North Reef I.) are new for the Capricornia Cays, while *Hippotion velox* was the most widespread species, recorded from 9 of the 15 islands.

Discussion

Butterflies

Our surveys bring the total number of butterfly species recorded from the Capricornia Cays to 46. The majority of these are vagrants or migrants that have flown or been blown in by winds from the mainland. For example, Fletcher (1973) described the appearance of several well known migratory species on Heron Island the day after a shift in the wind direction from predominantly easterly (from the open sea) to north-westerly (from the mainland).

Species that appeared the next day included *Belenois java* (Linnaeus), *Euploea core* (Cramer), *Danaus chrysippus* (Linnaeus) and *Catopsilia pomona* (Fabricius). In addition, there was a noticeable increase in the numbers of *Zizina labradus* (Godart). We witnessed a similar event while surveying Heron Island, where specimens of *B. java* were rarely seen during the first day of sampling but were common on the following two days. As there are no larval food plants of the caper white on Heron Island (Batianoff *et al.* 2009), the butterflies must have originated from the mainland.

[illegible]

Species	Bushy	East Hoskyn	West Hoskyn	Erskine	Heron	Lady Elliot	Lady Musgrave	Masthead	North Reef	North West	One Tree	Tryon	Wilson	Wreck	Fairfax (West)
Nymphalidae															
<i>Acraea andromacha</i>					*	3				*					
<i>andromacha</i> (Fabricius)															
<i>Danaus affinis</i> (Fabricius) ^						S									
<i>Danaus petilia</i> (Stoll)					1										
					*										
<i>Danaus plexippus</i> (L.)				S	*						*				
<i>Euploea core corinna</i>					*					1					
(W.S. Macleay)										*					
<i>Euploea tulliolus tulliolus</i>					*				1	*		*		*	
(Fabricius)															
<i>Hypolimnias bolina nerina</i>		*		*	2	*	S	S	2	*	S	S		*	
(Fabricius)							*		*			*			
<i>Hypolimnias misippus</i>						*									
(Linnaeus)															
<i>Junonia orithya albicincta</i>						S									
Butler ^															
<i>Junonia villida calybe</i>	1		1	2	3		1		*		1				
(Godart)							*								
<i>Melanitis leda bankia</i>		*		*	4		1	3	*				1	1	
(Fabricius)							*							*	
<i>Polyura sempronius</i>										*					
<i>sempronius</i> (Fabricius)															
<i>Tirumala hamata hamata</i>		*		*	3		S	S	*				1	*	*
(W.S. Macleay)							*								
<i>Vanessa kershawi</i> (McCoy)										*					
Lycaenidae															
<i>Candalides erinus erinus</i>	5		1	*			1		*		S				
(Fabricius)			*				*								
<i>Catochrysops panormus</i>					3		*						1		
<i>platissa</i> (Herrich-Schäffer)															
<i>Catopyrops florinda halys</i>		2		4		1	*		*		*				
(Waterhouse)		*				*									
<i>Jamides phaseli</i> (Mathew) ^					4										
<i>Lampides boeticus</i> (L.)			*	*	2				*						
<i>Leptotes plinius</i>	5	*							*	6					
<i>pseudocassius</i> (Murray)										*					

Species	Bushy	East Hoskyn	West Hoskyn	Erskine	Heron	Lady Elliot	Lady Musgrave	Masthead	North Reef	North West	One Tree	Tryon	Wilson	Wreck	Fairfax (West)
<i>Nacaduba berenice berenice</i> (Herrich-Schäffer)						1		*							
<i>Nacaduba biocellata</i> <i>biocellata</i> (C. & R. Felder)					*			S		*					
<i>Nacaduba kurava parma</i> Waterhouse & Lyell										*					
<i>Prosotas dubiosa dubiosa</i> (Semper) ^						7									
<i>Psychonotis caeli</i> <i>taiget</i> (C. & R. Felder) ^						4									
<i>Theclines thes miskini</i> <i>miskini</i> (T.P. Lucas)				*											
<i>Zizeeria karsandra</i> (Moore)	1			1	1	3	2	1		1		5	1	2	
<i>Zizina labradus labradus</i> (Godart)	2			6	2	1		2		*		*			*
<i>Zizula hylax attenuata</i> (T.P. Lucas)					*		*								
Total butterfly species	4	2	7	11	20	23	9	15	4	27	3	8	8	5	4

HAWK MOTHS

Sphingidae

<i>Hippotion velox</i> (Fabricius)		1	4	13	2			1		1	14			1	3
				*				*		*					
<i>Hippotion celerio</i> (L.) ^			1												
<i>Theretra margarita</i> (Kirby) ^			2		2										
<i>Macroglossum prometheus</i> (Boisduval) ^									1						

Total hawk moth species	0	0	1	3	1	2	0	1	1	1	1	0	0	1	1
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ODONATA (Dragonflies and Damselflies)

Coenagrionidae

<i>Ischnura aurora</i> (Brauer) ^						1	1		1						
<i>Ischnura heterosticta</i> (Burmeister) ^						3									

Aeshniidae

<i>Anax papuensis</i> (Burmeister)						3		*							
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Species	Bushy	East Hoskyn	West Hoskyn	Erskine	Heron	Lady Elliot	Lady Musgrave	Masthead	North Reef	North West	One Tree	Tryon	Wilson	Wreck	Fairfax (West)
Libellulidae															
<i>Diplacodes bipunctata</i> (Brauer) ^						2									
<i>Diplacodes trivialis</i> (Rambur) ^						1									
<i>Orthetrum caledonicum</i> (Brauer) ^						1									
<i>Orthetrum sabina</i> (Drury) ^						1									
<i>Orthetrum serapia</i> Watson ^						2									
<i>Pantala flavescens</i> (Fabr.)						1		*	1						
<i>Tramea loewii</i> Kaup ^						3									
Total dragonfly species	0	0	0	0	0	10	1	2	2	0	0	0	0	0	0

The islands with by far the most diverse recorded butterfly faunas are North West, Lady Elliot, Heron and Masthead Islands, with 27, 23, 20 and 15 species respectively. This is partly due to these islands having had their butterfly faunas surveyed previously (North West, Heron, Masthead), or to a disproportionate amount of time spent targeting butterflies in our survey (Heron and especially Lady Elliot Islands). However, these islands are also among the largest in area and the four islands with the most diverse floras within the Capricornia Cays (Batianoff *et al.* 2009). Migrating or vagrant butterflies may be more likely to make landfall due to the larger size of these islands and they may remain longer because of a greater likelihood of nectar sources being available. However, five butterfly species have been confirmed or strongly suspected to breed on islands in the Capricornia Cays: one hesperiid and four species of lycaenid (Reeves 1984).

Of the two skipper species recorded from the Capricornia Cays (Table 1), *Ocybadistes walkeri* Heron is widespread and known from 10 of the 15 islands (including four new islands from our survey). As noted by Reeves (1971) this species is almost certainly resident. Reeves (1971) suggested that its likely food plant on Erskine Island was the grass *Sporobolus virginicus* (L.) Kunth (Poaceae), although he later found its larvae feeding on another grass species, *Thuarea involuta* (G.Forst.) R.Br. ex Sm. (Poaceae) on West Hoskyn Island (Reeves 1973). This latter grass is common on Erskine Island and is found widely across the Capricornia Cays. It has been recorded from all 15 islands except One Tree and East Fairfax (Batianoff *et al.* 2009), where *O. walkeri* has not been recorded.

Three papilionid species are newly recorded from the Capricornia Cays, all probable vagrants. Both *Papilo aegeus* and *Papilio demoleus* have larvae that feed on citrus. *Citrus* species are naturalised, but rare, on Lady Musgrave Island (Batianoff *et al.* 2009) and grow as garden plants on Lady Elliot Island at least, so these butterfly species may be able to establish short-term breeding populations. However, high levels of inbreeding in small populations, in *P. aegeus* at least, may preclude the establishment of permanent populations (Orr 1994). No known food plants of *Graphium eurypylus* are recorded from the Capricornia Cays.

Our survey brings the number of pierids recorded from the Capricornia Cays to twelve, two of which are new: *Delias nigrina* from Lady Elliot Island, based on a photographic record by AM (Fig. 1d), and *Eurema alitha* based on a single specimen from Wilson Island. This latter species has been confused with *Eurema hecabe* in the past (Braby 1997) and some of the previous records of *E. hecabe* from the Capricornia Cays may refer to *E. alitha*.

Fourteen nymphalid species are now known from the Capricornia Cays, two of which are newly recorded here: *Junonia orithya* and *Danus affinis*. Six of these species have larval food plants on the islands (Batianoff *et al.* 2009) but, as yet, none has been found to breed there.

Fourteen lycaenid species are now known from the Capricornia Cays (see Figs 1a-c), three newly recorded here: *Jamides phaseli* (Fig. 1c), *Prosotas dubiosa* and *Psychonotis caelius*. According to Reeves (1984), four lycaenids are known to breed within the Capricornia Cays: *Catopyrops florinda* (Butler), *Leptotes plinius* (Fabricius), *Zizeeria karsandra* (Moore) and *Candalides erinus* (Fabricius) (Fig. 1a).

On West Hoskyn Island, Reeves (1973) found many eggs of the speckled line-blue, *Catopyrops florinda* on its food plant, *Caesalpinia bonduc* (L.) Roxb. *Catopyrops florinda* has been recorded from six islands, including Tryon, Heron and Masthead Islands, where *Caesalpinia bonduc* is not known to occur (Batianoff *et al.* 2009). It is likely that the butterfly breeds on one of its other food plants, *Pipturus argenteus* (G.Forst.) Wedd., on these islands.

Reeves (1978) also observed females of the Plumbago blue, *Leptotes plinius*, ovipositing on their food plant, *Plumbago zeylanica* L., on West Hoskyn Island. *Plumbago zeylanica* has a fairly restricted distribution in the Capricornia Cays and is known from 5 islands: Erskine, Masthead, One Tree, and East and West Hoskyn (Batianoff *et al.* 2009), but the butterfly has yet to be recorded from Erskine and Masthead Islands. We also failed to collect *Leptotes plinius* on Bushy Island despite the occurrence of *P. zeylanica* there (Walker *et al.* 1991).

On North West Island, Reeves (1969) found eggs of the spotted grass-blue, *Zizeeria karsandra*, on its food plant, *Tribulus cistoides* L. and he later found many eggs and larvae on the same plant on Erskine Island (Reeves 1971).

During the current survey, specimens of *Z. karsandra* were collected from all nine islands of the Capricornia Cays where *Tribulus cistoides* is known to occur (Batianoff *et al.* 2009). In addition, this species was also collected from Bushy Island, where *T. cistodes* has been recorded previously (Walker *et al.* 1991).

Reeves (1984) listed the small dusky-blue, *Candalides erinus*, as breeding on islands of the Capricornia Cays and previously noted that adults were closely associated with their food plant *Cassytha filiformis* L. on North West (Reeves 1969), Masthead (Reeves 1999) and Erskine Islands (Reeves 1971). Of the six islands where *Cassytha filiformis* occurs, *Candalides erinus* is known from all but North Reef Island. We also collected *Candalides erinus* from Bushy Island, where *Cassytha filiformis* also occurs (Walker *et al.* 1991).

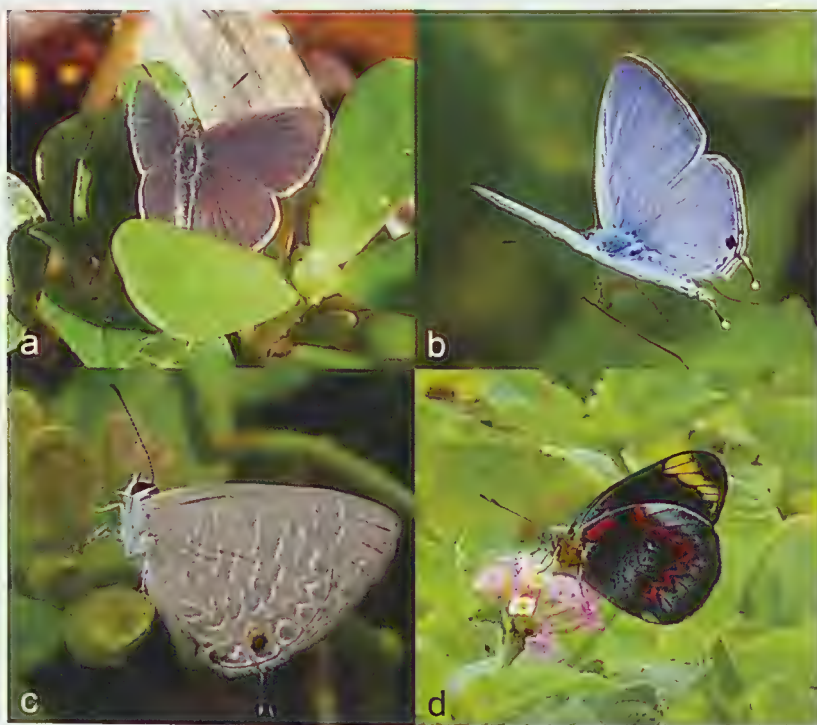


Fig. 1. Butterfly species photographed on islands of the Capricornia Cays. a, *Candalides erinus erinus* (Lycaenidae); b, *Catochrysops panormus platissa* (Lycaenidae); c, *Jamides phaseli* (Lycaenidae); d, *Delias nigrina* (Pieridae). All photographs by Andrew McDougall, from Tryon Island (a) and Lady Elliot Island (b-d).

Hawk Moths

Hippotion velox (Fig. 2b) is distributed from India and Sri Lanka, through south-east Asia to Australia, New Caledonia and Fiji (Common 1990) and apparently Tonga (Pestnet 2010). Within Australia it occurs in the Northern Territory and from Thursday Island, Queensland to north-eastern New South Wales (Common 1990). In Australia its larvae have been recorded feeding on three species of *Pisonia* (Nyctaginaceae): the vine *P. aculeata* L. (Dodd 1902), the bird-lime tree, *P. umbellifera* (J.R.Forst. & G.Forst.) Seem. (Moulds 1984) and *P. grandis* (Smith *et al.* 2004, Freebairn 2007). Outside Australia larval food plants include *Alocasia macrorrhizos* (L.) G.Don (as *Alocasia indica*) (Araceae) and *Ipomoea batatas* (L.) Lam. (sweet potato, Convolvulaceae) in Fiji (Robinson 1975) and species of *Morinda* L. (Rubiaceae), *Pisonia* L., *Brassica* L. (Brassicaceae) and *Colocasia* (Araceae) in Papua New Guinea (Mackey 1975).



Fig. 2. Hawk moth (Sphingidae) species recorded from the Capricornia Cays. a, *Hippotion celerio* from Erskine Island; b, *Hippotion velox* from One Tree Island; c, *Macroglossum prometheus* from North Reef Island; d, *Theretra margarita* (specimen from Toowoomba but this species recorded from Lady Elliot and Erskine Islands). Photographs by Geoff Thompson (QM).

The broad distribution of *Hippotion velox* across the Capricornia Cays (9 islands) is due to the wide availability of its host plant *Pisonia grandis*, which occurs on all 15 islands of the region (Batianoff *et al.* 2009). Outbreaks of *Hippotion velox* larvae occasionally cause large-scale defoliation of *Pisonia grandis* forest on coral islands of the Capricornia Cays and elsewhere in the

Pacific. Documented outbreaks have occurred on cays in the Coral Sea: South Magdelaine Cay in 2001 and North East Herald Islet in 2002 and 2007 (Smith *et al.* 2004, Freebairn 2007). An outbreak of what appeared to be *H. velox* also caused the complete defoliation of *Pisonia grandis* forest on Maninita Island (6.5 ha), Tonga, in May and June 2002 (Pestnet 2010). During our surveys we observed just small numbers of *H. velox* larvae only on One Tree, Heron and North West Islands. However, outbreaks of larvae caused extensive defoliation of *Pisonia grandis* trees on Wilson Island in 2008 and Masthead Island in July 2010 (John Olds pers. comm.).

Very small numbers of three additional hawk moth species were collected in the survey, all representing new records for the Capricornia Cays. Single specimens of *Hippotion celerio* (Fig. 2a), captured in a light trap from Erskine Island, and *Macroglossum prometheus* (Fig. 2c), captured in a light trap from North Reef Island, were probably vagrants as there are no recorded larval food plants (see Moulds 1981, 1984, 1998) of the species on these islands (Batianoff *et al.* 2009). Two specimens of *Theretra margarita* (Fig. 2d) were collected in light traps from Erskine and Lady Elliot Islands. The larval food plants of this species are apparently unknown and we are unable to speculate whether they are vagrants or from resident populations.

Dragonflies and damselflies

Not surprisingly, the dragonfly and damselfly fauna of the Capricornia Cays is depauperate, with only 10 species recorded from our survey. Most are strong-flying species and/or species that are known to disperse or be blown long distances from their larval breeding sites. Seven are distributed throughout most or all of Australia with the other three occurring in northern and eastern Australia: *Diplacodes trivialis* occurring as far south as southern NSW, *Orthetrum sabina* as far south as south-eastern Queensland and *Orthetrum serapia* as far south as Rockhampton, central Queensland (Theischinger and Endersby 2009).

Dragonflies and damselflies are probably regular visitors to islands of the Capricornia Cays, but the absence of permanent water bodies means that they are unable to establish resident populations. However, on Lady Elliot Island there is a sizable depression which fills with rainfall and might provide temporary larval habitat for some dragonflies and damselflies. All 10 odonate species we collected from Lady Elliot Island are known to breed in temporary water bodies (Watson *et al.* 1991, Theischinger and Hawking 2006). We recorded only two dragonfly species from other islands: *Ischnura aurora* from Lady Musgrave and North Reef Islands and *Pantala flavescens* from North Reef Island.

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